REMARKS

Applicant thanks the Examiner for considering Applicant's prior arguments and entering amendments to the claims. Claims 1-7, 9-17, 19-30, and 32-40 are pending in the present application. Respectfully, Applicant submits that these pending claims should be allowed, for the reasons set forth below.

Silence with regard to any of the Examiner's rejections is not an acquiescence to such. Specifically, silence with regard to Examiner's rejection of a dependent claim, when such claim depends from an independent claim that Applicant considers allowable for reasons provided herein, is not an acquiescence to such rejection of the dependent claim(s), but rather a recognition by Applicant that such previously lodged rejection is moot based on Applicant's remarks relative to the independent claim (that Applicant considers allowable) from which the dependent claim(s) depends.

Claim Rejections - 35 U.S.C. § 103(a)

The Examiner rejected all pending claims, claims 1-7, 9-17, 19-30, and 32-40, under 35 U.S.C. § 103(a) as being unpatentable over U.S Patent No. 5,737,581 to Keane in view of U.S. Patent No. 5,897,629 to Shinagawa et al.

In rejecting independent claim 1, the Examiner stated that Keane did not teach limitation 1(d):

> 1 (d) generating a next plurality of business models from the simulated plurality of business models by performing an evolutionary method including (i) determining business-model fitness in dependence on the operational business-model performances, (ii) selecting one or more business models in dependence on their fitness, and (iii) transforming the selected business

models into new business models by applying one or more genetic operators,
wherein the new business models incorporate elements of the selected
business models

Office Action, p. 5. The Examiner stated that limitation 1(d) was taught by Shinagawa, and

that it would have been obvious to combine the teachings of Shinagawa with those of

Keane. Office Action, pp. 6-8.

In rejecting independent claim 15, the Examiner cited the discussion of claim 1(d) as

the basis for finding that limitation 15(e) was taught:

15 (e) generating a next plurality of business models from the simulated
plurality of business models by performing an evolutionary method, wherein
the evolutionary method uses a fitness dependent on the operational business-
model performances and applies genetic operators to the building-blocks of
business models

Office Action, p. 15.

Limitation (e) of independent claims 34 and 38, and limitation (d) of independent

claims 35 and 39, are identical to limitation (e) of claim 15, and accordingly the Examiner

cited the discussion of claim 15(e) as the basis for finding that limitation (e) of claims 34

and 38, and limitation (d) of claims 35 and 39, were taught. Office Action, pp. 21, 23, 27,

30.

In rejecting independent claim 28, the Examiner cited the discussion of claim 15(e)

as the basis for finding that limitation 28(d)(i) was taught:

28 (d) generating a final business model of improved performance by
performing an optimization method, wherein the optimization method (i) uses
a fitness dependent on the operational business-model performances

Office Action, pp. 18-19.

Limitation (d)(i) of independent claims 36 and 40 are identical to limitation (d)(i) of claim 28, and accordingly the Examiner cited the discussion of claim 28(d)(i) as the basis for finding that limitation (d)(i) of claims 36 and 40 were taught. Office Action, pp. 26, 32.

It follows, therefore, that all of the rejections of the pending independent claims, independent claims 1, 15, 28, 34-36, and 38-40, are based upon the same reasoning and asserted prior art. Applicant respectfully suggests that the Examiner should withdraw these rejections, for the following reasons, which will be explained with reference to the Examiner's discussion of claim 1, limitation (d):

The Examiner suggested that Shinagawa taught limitation 1(d):

generating a next plurality of business models from the simulated plurality of business models by performing an evolutionary method including (i) determining business-model fitness in dependence on the operational business-model performances, (ii) selecting one or more business models in dependence on their fitness, and (iii) transforming the selected business models into new business models by applying one or more genetic operators, wherein the new business models incorporate elements of the selected business models

Furthermore, the Examiner stated that it would have been obvious to combine the teachings of Shinagawa with those of Keane. Office Action, pp. 6-8.

Respectfully, Applicant suggests that Shinagawa does not teach limitation 1(d), and further that it would not have been obvious to combine Shinagawa's teachings with those of Keane to arrive at the innovation set froth in pending claim 1.

Pending independent claim 1 as a whole deals with generating business models, for solving selected business problems. As a part of that overall process, limitation (d) teaches that a new generation (a "next plurality") of business models are to be generated by performing an evolutionary method based on the prior generation. The evolutionary method

includes determining the fitness of the prior generation of business models, choosing a

subset of those models based on their performance, and *applying genetic operators to the*

chosen subset of business models to generate the new generation of models. In short,

limitation (d) requires that *the business models themselves* are the subject of the genetic

operators.

Shinagawa, however is *fundamentally* different. Shinagawa teaches that, while

genetic algorithms have the advantage of "avoid[ing] spurious convergence towards local

optima," (column 2, lines 59-60) they have the serious drawback that "genetic algorithms

require enormous computation power and thus consume too much time to solve various

problems available in real life." (column 2, lines 65-67)

As an alternative to using genetic algorithms directly to solve business problems,

therefore, Shinagawa discloses an alternative. In Shinagawa, the actual search for a solution

to the business problem is carried out by a non-genetic method:

> It should be noted here that *the solution search is based on a high-speed*
> *algorithm other than the genetic algorithms.* The problem solver of the
> present invention can process a problem faster than such a solver that fully
> uses genetic algorithms in all searching operations required. (column 5, lines
> 5-9) (Emphasis added)

Indeed, as noted in the passage quoted, Shinagawa *teaches away from* the direct use

of genetic algorithms to solve business problems by teaching that the use of genetic

algorithms would be slower.

Shinagawa therefore uses genetic algorithms in a different way for a different

purpose.

As Shinagawa notes, a general technique for solving complicated optimization problems is to start with a potential solution, to evaluate it, and then to apply a search strategy: varying parameters, observing the effect of the variation, and then depending on the result making another variation. The assumption is that by a judicious choice of a search strategy the "space" of possible solutions can be explored, and a good solution can be found. (See column 1, lines 16-45.) Shinagawa recognizes that this traditional approach does not always yield satisfactory results. (See column 1, lines 46-56.)

Shinagawa points out that genetic algorithms were developed in an effort to deal with this problem, but concludes as noted above that they "consume too much time to solve various problems available in real life." (column 2, lines 65-67)

Shinagawa therefore proposes a *different* use of genetic algorithms. Rather than applying genetic algorithms directly to evolve the business model and thereby solve the underlying problem (which he has rejected as taking "too much time"), he discloses applying genetic algorithms *to the search strategy* used to explore the solution space. (Column 4, line 29 to column 5, line 1) As Shinagawa summarizes:

> the problem solver of the present invention employs the cyclic processes of: *optimizing solution searching strategies using a genetic algorithm*, carrying out a search according to the strategy being optimized, and feeding the search result back to the next *strategy optimization*. (Column 4, line 63 to column 5, line 1) (Emphasis added.)

Thus, in Shinagawa the genetic algorithms are used, not to modify the underlying business models, as in independent claim 1 herein, but to modify *a search strategy for looking for business models*. Indeed, as pointed out above Shinagawa utilizes this approach because it concludes that it is impractical ("too much time" is required) to actually apply the

genetic algorithms to the business models themselves, and Shinagawa therefore teaches way from doing so.

It follows that Shinagawa does not teach limitation (d) of claim 1, but on the contrary actually teaches away from it, and further that in view of Shinagawa's teaching away it would not have been obvious to combine *any* use of genetic algorithms with Keane to arrive at independent claim 1 of the current application.

Thus, the combination of Keane and Shinagawa does not teach claim 1, and claim 1 should be allowed. As discussed above, because all of the other independent claims were rejected based on the same reasoning, those claims also should be allowed. Thus, pending independent claims 1, 15, 28, 34-36, and 38-40 are all allowable.

Because Applicant's independent claims 1, 15, 28, 34-36, and 38-40 are allowable, Applicant's dependent claims 2-7, 9-14, 16-17, 19-27, 29-30, 32-33 and 37, which depend from those independent claims, are also allowable.

CONCLUSION

Applicant believes this Response to be fully responsive to the present Office Action. Thus, based on the foregoing Remarks, Applicant respectfully submits that this application is in condition for allowance. Accordingly, Applicant requests allowance of the application.

Applicant invites the Examiner to contact the Applicant's undersigned Attorney if any issues are deemed to remain prior to allowance.

Respectfully submitted,

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